Abstract

Mobile Ad hoc network is a self-configured network of devices connected using a wireless medium. Ad hoc network is a temporary network connection created for a specific purpose. MANET can be seen as a distributed computing environment, where Leader Election mechanism is used, for the purpose of synchronization. Election algorithms are used to find the leader for Distributed System. Various election algorithms are already proposed for electing a leader. In this paper, the main challenge is to find the new leader in lesser time with minimum number of message communication. In this paper, an algorithm is proposed to find the leader in lesser amount of time and messages through the use of Fibonacci Heap structure. The better
time complexity of operations using Fibonacci heap structure makes it suitable for the leader election in Mobile Ad Hoc Network, as compared to other tree structures.

References

- Tiwari, Kshama, & Umbrae Brajesh Comparative analysis of various leader election approaches, JACOTEH, 2015

Index Terms

Computer Science

Algorithms

Keywords

Mobile Ad Hoc Network  Fibonacci Heap Structure  Leader Election